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09/670,119	09/26/2000	Takashi Yumiba	2000 1253A	4870

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EXAMINER

CHEN, SHIN HON

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,119

Applicant(s)

YUMIBA ET AL.

Examiner

Shin-Hon Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5, 6, and 7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-24 have been examined.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 15, 16, 20 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ueda et al. European Patent No. 0802535 (hereinafter Ueda)

4. As per claim 1 and 6, Ueda discloses an information recording medium for recording at least copyrighted content information and cipher key information (Ueda: page 3 lines 34-59), wherein a part of said content information is scrambled and recorded in said information recording medium (Ueda: page 3 lines 34-59 and page 10 lines 1-29), and wherein the scrambled and recorded part of the content information is obtained through scrambling using scramble key information (Ueda: page 3 lines 34-59 and page 10 lines 1-29), which is obtained by converting said cipher key information by the use of a non-scrambled part of said content information (Ueda: page 3 lines 34-59 and page 10 lines 1-29).

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5. As per claim 15, Ueda discloses an information recording medium having at least a lead-in area and a data recording area (Ueda: page 3 lines 34 – page 4 line 55), copyrighted content information being recorded in said information recording medium (Ueda: page 3 lines 34 – page 4 line 55), wherein first cipher key information is recorded in said lead-in area (Ueda: page 3 lines 34 – page 4 line 55), wherein at least second cipher key information and said content information are recorded in said data recording area (Ueda: page 3 lines 34 – page 4 line 55), wherein a part of said content information recorded in said data recording area is scrambled and recorded (Ueda: page 3 lines 34 – page 4 line 55), and wherein said scrambled and recorded content information is obtained through scrambling using scramble key information, which is obtained by converting said second cipher key information by the use of a non-scrambled part of said content information (Ueda: page 3 lines 34 – page 4 line 55).

6. As per claim 16, Ueda discloses the information recording medium as claimed in claim 15. Ueda further discloses wherein said data recording area is divided into a plurality of sectors, each of which is composed of a sector header area for recording information for identifying the sector, and a main data area for recording said content information (Ueda: page 3 lines 34 – page 4 line 55), wherein said second cipher key information is recorded in said sector header area, wherein a part of said content information is scrambled and recorded in said main data area (Ueda: page 3 lines 34 – page 4 line 55), and wherein the scrambled and recorded part of said content information is obtained through scrambling using scramble key information, which is obtained by converting said second cipher key information by the use of a non-scrambled part of said content information for each sector (Ueda: page 3 lines 34 – page 4 line 55).

7. As per claim 20, Ueda discloses the information recording medium as claimed in claim 15. Ueda further discloses wherein said second cipher key information recorded in said sector header area is information which is obtained by encrypting predetermined second key information by the use of said first cipher key information recorded in said lead-in area (Ueda: page 3 lines 34 – page 4 line 55).

8. As per claim 21, Ueda discloses the information recording medium as claimed in claim 16, Ueda further discloses wherein said second cipher key information recorded in said sector header area is information which is obtained by encrypting predetermined second key information by the use of said first cipher key information recorded in said lead-in area (Ueda: page 3 lines 34 – page 4 line 55).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-5, 8, 10, and 17-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Sogabe et al. U.S. Pat. No. 6611534 (hereinafter Sogabe).

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11. As per claim 2, Ueda discloses the information recording medium as claimed in claim 1. Ueda does not explicitly disclose wherein the non-scrambled part of said content information for generating said scramble key information includes at least copy control information. However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 9 lines 33 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the system of Ueda because it increases the security of copy protection by using copy control information to increase the difficulty of obtaining cipher key through the use of a control key.

12. As per claim 3 and 10, Ueda discloses the information recording medium as claimed in claim 1 and 6 respectively. Ueda further discloses wherein said information recording medium comprises a recording area divided into a plurality of sectors, wherein a plurality of data which said content information is divided into are recorded in said sectors, respectively (Ueda: page 3 lines 34 – page 4 line 55), and wherein the non-scrambled part of said content information for generating said scramble key information includes a part of said content information that changes sector by sector (Ueda: page 3 lines 34 – page 4 line 55). Ueda does not explicitly disclose non-scrambled part of said content information include said copy control information. However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 9 lines 33 – column 10 line 15). Same rationale applies here as above in rejecting claim 2.

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13. As per claim 8, Ueda discloses the information recording medium as claimed in claim 6. Ueda does not explicitly disclose wherein the non-scrambled part of said content information for generating said scramble key information includes at least copy control information. However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 7 lines 33 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the system of Ueda because it increases the security of copy protection by applying key encrypting key scheme, which is well-known in the art.

14. As per claim 4 and 5, Ueda discloses a method for reproducing information recorded in an information recording medium for recording at least cipher key information and content information (Ueda: page 3 lines 34 – page 4 line 55); a part of said content information being scrambled and recorded in said information recording medium (Ueda: page 3 lines 34 – page 4 line 55 and page 10 lines 1-19) and converting said decoded key information into converted decoded key information by using non-scrambled content information of said content information; and descrambling said scrambled and recorded content information by using said converted decoded key information (Ueda: page 3 lines 34 – page 4 line 55). Ueda does not explicitly disclose said method including the steps of: decoding said cipher key information recorded in said information recording medium into decoded key information by using predetermined key information. However, Sogabe discloses these limitations (Sogabe: column 7 line 20 – column 8 line 27 and column 9 lines 33 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the

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system of Ueda because it increases the security of copy protection by applying key encrypting key scheme, which is well-known in the art.

15. As per claim 17, Ueda discloses the information recording medium as claimed in claim

15. Ueda does not explicitly disclose wherein the non-scrambled part of said content information for generating said scramble key information includes at least copy control information.

However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 7 lines 33 – column 10 line15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the system of Ueda because it increases the security of copy protection by using copy control information to increase the difficulty of obtaining cipher key through the use of a control key.

16. As per claim 18, Ueda discloses the information recording medium as claimed in claim

16. Ueda does not explicitly disclose wherein the non-scrambled part of said content information for generating said scramble key information includes at least copy control information.

However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 7 lines 33 – column 10 line15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the system of Ueda because it increases the security of copy protection by using copy control information to increase the difficulty of obtaining cipher key through the use of a control key.

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17. As per claim 19, Ueda discloses the information recording medium as claimed in claim 16. Ueda further discloses wherein the non-scrambled part of said content information for generating said scramble key information includes a part of said content information that changes sector by sector (Ueda: page 3 lines 34 – page 4 line 55). However, Ueda does not explicitly disclose the non-scrambled part of said content information includes at least said copy control information. However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 7 lines 33 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the system of Ueda because it increases the security of copy protection by using copy control information to increase the difficulty of obtaining cipher key through the use of a control key.

18. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Kato et al. U.S. Pub. No. US2001/0019615 (hereinafter Kato).

19. As per claim 7, Ueda discloses an information recording medium having at least a data recording area and a lead-in area (Ueda: page 3 lines 34 – page 4 line 55), copyrighted content information being recorded in said information recording medium (Ueda: page 3 lines 34 – page 4 line 55), wherein at least first cipher key information and said content information are recorded in said data recording area (Ueda: page 3 lines 34 – page 4 line 55), wherein second cipher key information is recorded in said lead-in area and wherein a part of said content information recorded in said data recording area is scrambled and recorded (Ueda: page 3 lines 34 – page 4 line 55), and wherein said scrambled and recorded content information is obtained through

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scrambling using scramble key information (Ueda: page 3 lines 34 – page 4 line 55), which is obtained by converting said first key information by the use of the second key, which is stored in data recording area. Ueda does not explicitly disclose converting the key stored in lead-in area by use of a non-scrambled part of said content information. However, Kato discloses that the lead-in area key is used as a cipher key and it is decrypted by second key before it can be used to decrypt content (Kato: [0005]-[0009] and [0054]-[0059]). It would have been obvious to use the second key as the non-scrambled part of content for converting the lead-in area key. Therefore, it would have been obvious to one having ordinary skill in the art to combine the teachings of Kato within the system of Ueda because it is well known in the art to use the lead-in area to store enciphering key.

20. As per claim 11, Ueda as modified discloses the information recording medium as claimed in claim 7. Ueda as modified further discloses wherein said information recording medium has a recording area divided into a plurality of sectors, wherein a plurality of data which said content information is divided into are recorded in said sectors, respectively (Ueda: page 3 lines 34 – page 4 line 55) and wherein the non-scrambled part of said content information for generating said scramble key information includes said copy control information, and a part of said content, information that changes sector by sector (Ueda: page 3 lines 34 – page 4 line 55).

21. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Kato and further in view of Sogabe.

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22. As per claim 9, Ueda as modified discloses the information recording medium as claimed in claim 7. Ueda as modified does not explicitly disclose wherein the non-scrambled part of said content information for generating said scramble key information includes at least copy control information. However, Sogabe discloses using copy control information to affect the generation of (Sogabe: column 7 line 20 – column 8 line 27 and column 9 lines 33 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the combination of Ueda-Kato because it increases the security of copy protection by using copy control information to increase the difficulty of obtaining cipher key through the use of a control key.

23. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Sogabe and further in view of Kato.

24. As per claim 12 and 13, Ueda disclose a method for reproducing information recorded in an information recording medium having at least a data recording area and a lead-in area (Ueda: page 3 lines 34 – page 4 line 55), at least first cipher key information and content information being recorded in said data recording area (Ueda: page 3 lines 34 – page 4 line 55), and a part of said content information recorded in said data recording area being scrambled and recorded (Ueda: page 3 lines 34 – page 4 line 55) and second cipher key information being recorded in said lead-in area and decoding said first cipher key information stored in said lead-in area into second key information by using said second key information (Ueda: page 3 lines 34 – page 4 line 55).

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Ueda does not explicitly disclose converting the key stored in lead-in area by use of a non-scrambled part of said content information. However, Kato discloses that the lead-in area key is used as a cipher key and it is decrypted by second key before it can be used to decrypt content (Kato: [0005]-[0009] and [0054]-[0059]). It would have been obvious to use the second key as the non-scrambled part of content/data recording area key for converting the lead-in area key. Therefore, it would have been obvious to one having ordinary skill in the art to combine the teachings of Kato within the system of Ueda because it is well known in the art to use the lead-in area to store enciphering key.

Ueda does not explicitly said method including the steps of: decoding said first cipher key information stored in said data recording area into first key information by using predetermined key information. However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 9 line 32 – column 10 line 15: control key). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the combination of Ueda-Kato because it increases the security by applying key encrypting key scheme, which is well known in the art.

Sogabe further discloses converting said second key information into converted second key information by using non-scrambled content information stored in said data recording area (Sogabe: column 7 line 20 – column 8 line 27 and column 9 line 32 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to use the copy control information to generate the ciphered key stored within the enciphered data. Therefore, it would have been obvious to combine the teachings of Sogabe within the combination of Ueda, Kato

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and Sogabe because it provides stronger enciphering key by taking dynamic information to generate cipher key.

Ueda as modified further discloses and descrambling said scrambled and recorded content information by using said converted second key information (Ueda: page 3 lines 34 – page 4 line 55).

25. As per claim 14. Ueda as modified discloses the apparatus as claimed in claim 13. Ueda as modified further discloses wherein said non-scrambled content information for converting said second key information into said converted second key information includes at least copy control information (Sogabe: column 7 line 20 – column 8 line 27 and column 9 line 32 – column 10 line 15).

26. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Kim U.S. Pat. No. 6694023 (hereinafter Kim).

27. As per claim 22 and 23, Ueda discloses a method for reproducing information recorded in an information recording medium having at least a lead-in area and a data recording area (Ueda: page 3 lines 34 – page 4 line 55), first cipher key information being recorded in said lead-in area, at least second cipher key information and content information being recorded in said data recording area (Ueda: page 3 lines 34 – page 4 line 55), and a part of said content information recorded in said data recording area being scrambled and recorded in said information recording medium (Ueda: page 3 lines 34 – page 4 line 55), said method including the steps of: decoding

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said first cipher key information stored in said lead-in area into first key information by using predetermined key information (Ueda: page 3 lines 44-47); decoding said second cipher key information stored in said data recording area into second key information by using said first key information (Ueda: page 3 lines 34 – page 4 line 55); and descrambling said scrambled and recorded content information by using said converted second key information (Ueda: page 3 lines 34 – page 4 line 55).

Ueda does not explicitly disclose converting said second key information into converted second key information by using non-scrambled content information stored in said data recording area. However, Kim discloses that limitation (Kim: column 4 lines 18-67 and column 5 lines 41-57). It would have been obvious to one having ordinary skill in the art to combine the teachings of Kim within the system of Ueda because it is well known in the art to use conversion table to generate enciphering key to encipher digital data.

28. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of Kim and further in view of Sogabe.

29. As per claim 24, Ueda as modified discloses the apparatus as claimed in claim 23. Ueda as modified does not explicitly disclose wherein a non-scrambled part of said content information includes at least copy control information. However, Sogabe discloses that limitation (Sogabe: column 7 line 20 – column 8 line 27 and column 9 lines 33 – column 10 line 15). It would have been obvious to one having ordinary skill in the art to combine the teachings of Sogabe within the combination of Ueda-Kato because it increases the security of copy protection

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by using copy control information to increase the difficulty of obtaining cipher key through the use of a control key.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park U.S. Reissued Pat. No. RE37052 discloses copy prevention method and apparatus of a digital recording/reproducing system employing a marker including copy protection information and code data for descrambling.

Nakamura U.S. Pat. No. 6347846 discloses method and an apparatus to control copying from a data providing device to a data receiving device.

Lee et al. U.S. Pat. No. 6266481 discloses conditional access system for local storage device.

Ishibashi U.S. Pat. No. 6021199 discloses motion picture data encrypting method involving selectively scrambling sectors of data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (703) 305-8654. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shin-Hon Chen
Examiner
Art Unit 2131

SC


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
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